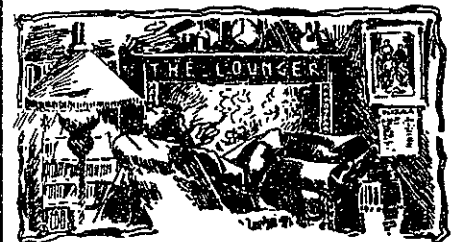


Lounger Again Hits Crusaders In Outburst Against Objectors' Views



To toss a statement of a real soldier back in the pans of the shoddy imitations better known as Booze-Aiders, Napoleon ground out the following wise words, "The truth alone wounds." Cowper yelled, "For truth is unwelcome, however divine." Now the Lounger is not divine; far, far, too far from it, but he has an uncanny faculty of popping the unknown and little-suspected truth all over the skies, letting heads fall where they may. The crew of reformers who last felt the lash of public disclosure are up in the air like the well-known cow on the now highly-publicized lunar expedition.

Judging by the letters which have poured in villifying the Lounger, he must have hit a pile of soreheads. In the letter masked in anonymity and signed "E. H.," the Lounger is accused of exaggeration; tsk, tsk, tsk, to think that after all his years of service he should be suspected of such a heinous crime! Presumably the Lounger exaggerated in calling them "dim wits." He apologizes for this and rises to remark that what you have not got, certainly cannot be dim. Of course there may be a brain somewhere in the mob, but to date it has remained concealed. The average intelligence of the pack is exemplified by the youngster's statement that "propaganda is immensely more effective than mere voting." This is a swell idea. Let us have presidential campaigns waged in the newspapers with streamers, edits, squibs, cuts and captions taking the place of votes, bullets, etc. It would be more effective than mere voting, anyway (so

(Continued on page three)

Rifle Team Engages Marines This Friday

Team Also Takes Part in Four Telegraphic Matches This Week

Varsity rifle team members engage in five matches this week, four of which are postal matches and the fifth is a shoulder-to-shoulder affair with the Marine Team from the Boston Navy Yard at the Technology range, on Friday, December 4. This year's varsity team will be composed largely of Sophomores since most of last year's best shots have been graduated. Sergt. William A. Easterling, who won the national small-bore rifle championship this year, at Camp Perry, is the "crack shot" among the members of the Marine team. This match with the Marines will be a severe test for the team, and a win will mean much toward future success. Continued success of the rifle team, which is one of the best winning teams in the Institute, depends on the ability of the Sophomore candidates, and success over the highly-touted Marine team should inspire confidence.

New Men Good

Only three veterans, Capt. John C. Brown '32, William H. Hodges '32, and Ralph W. Hamilton G, remain on the team. Best among the Sophomores who will complete the roster include Benjamin A. Bassinor, Wilbur P. Foote, and John Long Moomaw of last year's freshman team. In previous years the team engaged in many postal matches; this year, however, the majority of the matches will be shoulder-to-shoulder, that is, there will be actual competition on the same range. The telegraphic matches this week are with Johns Hopkins University, Kansas State College, University of Indiana, and City College of New York. Because of the change in policy several trips are scheduled, one to West Point, one to New York to engage Columbia and City College of New York, and one to Vermont.

RESUME DRIVE FOR A. E. S. MEMBERSHIP

Privileges Include Chance to Fly New Glider, Hear Aeronauts Talk

Freshmen trying out for managing board positions on the Aeronautical Engineering Society are in charge of the membership drive which reopens today. The drive was started early in the year, but was suspended because of the death of the late Dr. Samuel W. Stratton.

Membership includes opportunities to hear some of the country's leading figures in aviation who will be the guest speakers at the smokers. For those men who turn out and help build the club's new glider, there will be the opportunity of flying it at the club's headquarters at the Cape.

Signups may be made anytime until 4 o'clock on Wednesday afternoon at the club's booth in the main lobby.

Technology Student Body Gives \$500 for Unemployment Relief

Executive Committee Makes Donations From Funds Of Activities

A gift of five hundred dollars was made to the Cambridge Unemployment Relief Fund by the Executive Committee of the Institute Committee, last Wednesday, to represent donations from Technology students, following a meeting of student delegates from the various educational institutions in Cambridge with the Executive Committee of the Cambridge Unemployment Relief Committee.

The decision to make the donation from funds set aside for undergraduate activities, including publications and athletics, rather than from personal solicitation of the students, came as a result of the proximity of the recent T.C.A. Drive early this fall.

Executive Committee Passes

Although it is generally the custom to allow the Institute Committee to pass on any action of the student body in relation to the general public, it was felt in this case that promptness in the matter was essential and because the Thanksgiving holiday forced the postponement of the regular Institute Committee meeting, the Executive Committee, acting on the advice of Bursar Horace S. Ford, decided to make the donation immediately. It was hoped that by this action other colleges in the district would extend their efforts toward the cause.

It is expected that the matter will be brought before the Institute Committee for approval at its next meeting on Thursday.

HOCKEY SQUAD SHOWS IMPROVED TEAM WORK

Coach Duplin Prepares Team For Harvard Struggle

Under the able coaching of Vic Duplin, the Technology hockey squad is rapidly getting into shape for its first game of the season with Harvard on December 9.

If the regularity with which the men have reported for the early morning practices, and the rapidly improving teamwork displayed in the scrimmages are indications of the spirit and ability of the squad, the Beavers may well look forward to a very successful season.

Coach Duplin has four teams on the ice at the present time, though no distinct varsity team has as yet been picked. From the freshman team of last year there are several valuable candidates, and the varsity losses due to graduation were moderately small.

Coal Bill Varies With Weather At Technology

Housewives are not the only ones who blessed last week's spell of warm weather because of the small saving it made possible in their coal bill. The Institute also profits from Ol' Man Weather's clemency. Instead of the approximately sixty tons of coal which are required to heat Technology on an ordinary cold day, only from thirty-five to forty tons per day were needed. Contrast this with the seventy tons which must be burned in zero weather in order to prevent Technology students from shivering. The largest amount of coal ever used in one day was seventy-three tons, burned during a spell of sub-zero weather.

Discoverer of Babe Ruth Will Speak at Catholic Club Dinner

Several Prominent Sportsmen Will Speak At Sports Dinner Meeting

Brother Gilbert, the man who discovered the "Sultan of Swat" while at St. Mary's Industrial School, and several other famous figures in the world of sport will speak at a dinner meeting and sports night to be held by the Technology Catholic Club in the North Hall of Walker Memorial next Wednesday evening at 6 o'clock.

John Finnerty, president of the Club, originally planned the dinner meeting to precede the annual All-Technology Sports Night, but as Sports Night will not be held this year, the Club has arranged its own sports program. Among those expected to be present are Joe McKenney, head coach at Boston College; Bill Ormsby former Notre Dame star and now line coach at Boston College; Francis Ouimet, national open golf champion; Nils Nelson, head line coach at Harvard, and members of the Boston Bruins hockey team.

Moving Pictures Again

Last year, at a similar meeting addressed by Bob Quinn of the Boston Red Sox, Nils Nelson showed moving pictures, which he has promised to show again this year, of all the major football games in the East for that year. Many of the sports leaders at Technology will also be present, including Henry "P. T." McCarthy.

Dinner will be served at 6 o'clock and will be over early enough to allow students time to study. Tickets, at 75 cents each, may be purchased from any of the Club officers or at the door.

CHEMISTRY AWARDS GIVEN TO STUDENTS

New Interest in Chemistry Is Expected to Result

Awards made annually to students for merit in Chemistry were announced by the Alpha Zeta chapter of Alpha Chi Sigma, national chemical fraternity, at a smoker held last Tuesday evening.

The first of these is an award for merit in the freshman Chemistry course. It consists of a plaque which will bear the names of the recipients and will be displayed in the department of Chemistry. The second award is made to the Junior who has done meritorious work in Chemistry during his three years at the Institute. Last year it took the form of membership in the American Chemical Society.

The recipients of last year's awards were respectively H. L. Reichart '34 and B. E. Blaisdell '31. It is hoped that the establishment of these two awards will help to stimulate an interest in the courses in Chemistry offered at the Institute and in Chemistry as a science and as a profession.

Leipzig Biologist Delivers Sedgwick Lecture Tuesday

Address Will Be Ninth in the Series Established by W. T. Sedgwick

Dr. Henry E. Sigerist, of the Institute for the History of Medicine, University of Leipzig, Germany, will deliver the ninth annual William Thompson Sedgwick memorial lecture at the Institute, tomorrow afternoon. Dr. Sigerist will discuss "The Philosophy of Hygiene." The lecture, which is open to the public, will be held in Room 10-250 at the Institute at 4.30 o'clock.

The Sedgwick Memorial Lecture chair was established for the purpose of commemorating the services of William Thompson Sedgwick to the cause of biology and public health. The lectures are given annually under the auspices of Technology's department of Biology, which he created, and are delivered by men distinguished in some subject within the general scope of biology and public health.

The committee in charge of the lecture chair includes Dr. Samuel C. Prescott and Professor Clair E. Turner of Technology; Edwin O. Jordan, University of Chicago; Gary N. Calkins, Columbia University; Professor Charles E. A. Winslow, Yale University, and Wade H. Frost, Johns Hopkins School of Public Health.

INSTITUTE ACQUIRES UNIQUE APPARATUS FOR SPECTRA WORK

Unusual Devices Are Purchased For New Spectroscopic Laboratory

\$300,000 COST OF ENGINE

Room of Laboratory is Set Aside For Private Use of Dr. Compton

With many novel and ingenious instruments, the new spectroscopic laboratory, located in the rectangular court formed by Buildings 2, 4, 6 and 8, has recently been opened. This laboratory is in a two-story building which has been built on a separate foundation from the larger buildings to decrease vibration.

Among the new instruments are two huge circular spectrographs, which are said to be the largest of their kind in the world, and a large vacuum spectrograph which was made by Professor George R. Harrison last year.

New Instruments Installed

On the first floor are two large rectangular rooms in which the new spectrographs have been placed. These spectrographs consist of two tables, one 35 feet in diameter and the other 15 feet across, mounted on concrete pillars. On the top of the table is a small railroad track running along the circumference on which eighty movable photographic plates are mounted. A light beam is sent through an opening in the circle across the table where it strikes a grating which disperses the beam into varied spectrums to be photographed on the plates. These spectrographs are now in the process of completion.

In addition there are two other rooms on the first floor, one has been set aside as a private laboratory for President Karl T. Compton and the other has been set aside for future use to house a ruling engine. This engine will be used to make spectrum gratings, and will cost \$300,000.

(Continued on page three)

Radio Operation Is New State Course

Trips to Radio Stations Will Be Made to Study Practices Of Operation

Commercial radio operation will be one of the University Extension Courses of the Massachusetts Department of Education to be given at the Institute. Burdette H. Buckingham '31, graduate of Course VI and a radio engineer and licensed commercial radio operator, will be the instructor. A laboratory has been partitioned off at the end of Building 5 and will be known as Room 5-040. Room 3-305 has been lent by the Signal Corps of the Military Science Department as an instruction room.

Of the three and possibly four parts into which the Course will be divided, the first will cover radio-telegraph code instruction and practice, elementary direct-current theory, elementary alternating-current theory, and go into, and perhaps finish, oscillatory circuits. Tuition for this first part will be eight dollars. Textbooks will be extra. The first meeting will be Monday, December 7, in the instruction room at 7.30 o'clock. Meetings will be held on Mondays and Fridays until January 8.

Any Student Eligible

Registration for the Course may be made at Room 217, in the State House, or at the first meeting. Anyone is eligible to enter. Certificates will be awarded to qualified students. The other parts of the Course will deal with radiation and radiating systems, radio transmitting and receiving apparatus, radio compass operation, radio operator's duties including message accounting, radio laws and operating procedure, and inspection trips through ship and land radio stations.

Distribution of Foreign Registered Students Massachusetts Institute of Technology

COMPILED BY THE T. C. A.

NOVEMBER, 1931

Country	1931-32	1930-31	Country	1931-32	1930-31
Argentina	1	0	Italy	0	2
Australia	2	1	Japan	5	6
Austria	1	1	Lithuania	2	2
Belgium	3	1	Mexico	12	15
Brazil	0	2	Norway	2	2
British West Indies	3	0	Palestine	3	3
Canada	30	32	Panama	4	7
Chile	1	1	Peru	2	2
China	22	26	Philippine Islands	2	4
Colombia	7	10	Poland	1	1
Costa Rica	1	2	Porto Rico	4	8
Cuba	15	10	Russia	26	3
Czechoslovakia	1	0	San Salvador	2	2
Denmark	1	1	Siam	3	4
Ecuador	2	1	South Africa	3	3
Egypt	0	2	Spain	2	6
Estonia	1	1	Straits Settlements	0	1
France	2	4	Sweden	2	2
Germany	5	9	Switzerland	1	1
Great Britain	3	8	Syria	0	2
Greece	1	1	Turkey	1	1
Hawaii	6	3	Venezuela	2	2
India	6	11	Virgin Islands	0	1
Ireland	1	1	Total	193	207

1931-32 41 Countries

1930-31 43 Countries

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JUST REWARDS

NO matter what may be one's particular course of study at Technology, the beneficial qualities lie in the obtaining of a high cumulative rating, and in showing capabilities of leadership in student activities. As a reward for accomplishing these two ends in the proper proportions, one is elected to Tau Beta Pi, the national honorary engineering fraternity. Certainly this is one organization to be a member of which, one must meet high and severe standards. Two weeks ago the local chapter announced its selections for this year, and we would commend their choice. There is one point, however, which should be raised at this juncture. Tau Beta Pi elects men who are following engineering courses; no provision is made for those men interested in pure science.

This fraternity and Phi Beta Kappa are undoubtedly among the largest of the national organizations in the United States. The desirability of higher scholastic standings coupled with undergraduate leadership has made them practically indispensable in modern education. The obvious difficulty of a student's meeting these requirements at Technology makes it apparent that such a reward is highly in order. Why not, then, institute a chapter of Phi Beta Kappa here for those men studying Architecture, and pure Chemistry, Physics, Biology, Geology, and like courses which are not strictly engineering, and students of which are therefore ineligible to Tau Beta Pi?

There are at present approximately five hundred men registered in these "pure science" courses. This represents a sizable portion of the undergraduate body. As we pointed out Wednesday in this column, the curriculum of the Institute is leaning more and more toward pure science; stressing research and scientific investigation to a greater degree as time goes on. It appears, therefore, that the present reward for scholastic accomplishment is to be available to a smaller number of men in future years.

In stimulating undergraduate leadership and high scholastic ratings an organization of this sort may be of benefit to students and school alike. In the records of Alumni members of the local chapter we may find men who are carrying the reputation of Technology into new and wider fields. In the present membership we find men who should duplicate the examples of their predecessors. It is regrettable, therefore, that so many students are ineligible to these inspiring qualities. There are a number of members of Phi Beta Kappa at Technology, both in the graduate courses and in the Faculty. Could we not interest these men in maneuvering for a chapter of their fraternity at the Institute? Were this accomplished, we should see a wider and a more balanced distribution of merited scholastic rewards at Technology.

AFTER THE GAME

IN extending the hospitality of the Institute to the members of athletic teams which come here from other schools, the Beaver Key Society, in the short span of a year, has distinguished itself as an organization of great usefulness. To Technology sports in general the Society represents services which contribute much to their reputation. Naturally enough such services involve a few minor expenditures, and the coffers must be refilled from time to time.

With this in mind, the Society has in the past and will again this Saturday evening offer to the student body a dance to be held after the basket ball game. The price of admission is only a nominal fee, the Main Hall of Walker Memorial will be used for the dancing, the orchestra should be above reproach, festivities will last until midnight, and there will be present all the atmosphere of the more elaborate and more expensive dances that are held during the school year. We would urge that the undergraduate body take advantage of this opportunity to spend a most enjoyable and inexpensive evening and, at the same time to contribute to an organization which has the best interests of Technology sports at heart.

Various Types of Heat Flow Studied In Chemical Engineering Laboratory

Pipes Of All Shapes And Sizes
Used In Applied Chemistry
Research Laboratory

Many a curious glance is cast by Institute students at the apparatus in the Applied Chemistry and Chemical Engineering laboratory in Room 2-110 as they pass through during the day, but most of the onlookers are mystified by what they see.

In one corner they see a hole in the floor out of which rises a series of pipes for no obvious reason. On the other side of the room is a wind tunnel whose purpose is also beyond knowledge. But the most characteristic feature of the entire group of apparatus is that it consists mostly of pipes of all shapes and sizes.

If a cylindrical, steam-heated pipe is placed transversely in a stream of air flowing at high velocity past it, how do the different sides of the pipe vary in rate of heat loss? The most obvious answer to most people is not the correct one, as can be determined by means of such a pipe placed in the wind tunnel.

Greatest Loss at Back

Both by theoretical calculation and experimental data it has been shown that the greatest heat loss takes place at the back of the pipe; that is, farthest from the source of air flow, while the sides are cooled to almost no extent. The front, except at low velocities, is cooled a good deal more slowly than the back.

In order to find the exact heat loss in the various parts of the pipe, it is made of segments, each of which has a separate outlet and inlet for the steam. The wind tunnel can be made longer or shorter, wider or narrower, as desired, by means of movable sections and sides. At present the size of the fan does not allow for great differences in velocity, but it is expected that a larger fan will be installed later.

Study Heat-Friction Relations

Those pipes rising from a hole in the floor are part of an experiment to find the effect that change in temperature of a fluid moving through a pipe causes on the friction between the fluid and the wall of the pipe. Formerly it has been assumed

that the velocity and temperature distribution curves of gases and liquids are similar, but this research has proved the assumption wrong.

The two smallest pipes are the main ones; one is cooled by a jacket containing water and the other is heated with a steam jacket. The velocity is measured at different points throughout with small Pitot meters. All other pipes visible are just an arrangement by which the fluid may be made to flow either up or down.

In the rear of the laboratory a dryer, which contains a drying and humidifying arrangement that allows exact control of the humidity of a definite volume of air, has just been installed. This air is kept flowing through several sections of pipe, the apertures between which are of a size to allow the same volumetric rate of flow throughout.

The present sections can be taken out and other, larger ones put in their place. The object in this case is to measure the seasoning effect upon wood and other materials. Indeed, it might be called an extremely well regulated kiln on a laboratory scale.

Insignificant but is Important

Another bit of apparatus in the laboratory, which looks rather insignificant, owing to the fact that it is small, is employed for accurate determinations of the rates of heat transmission of a fluid flowing at various velocities through a small tube. This tube is placed within a steam jacket, which is in turn placed in another jacket drawing steam from the same source.

By such an arrangement the errors commonly incurred by heat losses to the room are eliminated, since this quantity of heat can be measured separately from the quantity given up by the moving fluid. Ordinarily measurements have been taken on water, air, and oil only, because other fluids have been too costly to handle. Now, on account of the small size of the apparatus, even expensive fluids may be employed. The particular construction of this apparatus allows extremely accurate determinations of specific heats to be made if desired.

OPEN FORUM

To the Editor of THE TECH:

I suppose the board of THE TECH is now accepting congratulations from the W.C.T.U. and other similar organizations for having taken up the battle against those who are honest enough to frankly declare themselves opposed to Prohibition. With narrow-mindedness that might even make Bishop Cannon hesitate, "The Lounger" has seen fit to momentarily forget his desperate and courageous battle for rotten eggs at Field Day and to attack the new anti-Prohibition club with reasoning, that to say the least, is childish. Your editorial is even more ridiculous, because no one takes loungers very seriously anyway. You attempted to prove that the repeal of Prohibition would increase unemployment rather than decrease it. You have taken the usual course of "pussyfooters" — evading the main issue by talking about a relatively unimportant one.

The vast majority of those who are opposed to Prohibition are so because they want beer back for personal reasons, or because they consider Prohibition unworkable and an infringement on the privileges of the individual. It is best and certainly more to the point, to face these facts first and then, having disposed of them, to take up those of less importance.

The staff of THE TECH should really take up editorial work for the D.A.R. instead of playing engineer, but then you might be even too reactionary for the D.A.R. It seems rather ridiculous for college students to consider themselves called upon to defend Prohibition, and especially in such a silly manner. You should at least show less ignorance of the times by continuing your policy of writing up the movies, and you would get more support, at least from the paid members of the M.I.T. Army, if you thought up some more moral reasons for Military Science.

(Signed) HENRY REGNERY '34.

To the Editor of THE TECH:

I take this opportunity to congratulate the "Lounger" on his attitude toward the "Crusaders." Anti-Prohibitionists are composed of two classes of people: (1) those who are ignorant of the true facts about Prohibition, and (2) those selfish individuals who think more of their personal pleasure than of the welfare of the nation as a whole.

Those in class (1) compose the majority of the so-called Crusaders, and should be educated as to pre-Prohibition conditions, the relative advantages and disadvantages of Prohibition, etc., but nothing can be done to change the opinion of those in class (2) since they care nothing about the rights of others and think only of themselves.

It would be an insult to the intelligence of Technology students if such an organization as the "Crusaders" obtained a foothold here.

R. B. J. Grad.

ALABAMA UNIVERSITY NAMES GIVE TROUBLE

An Associated Press dispatch from the University of Alabama at Tuscaloosa, says that the answer to the old question of "What's in a name?" is now "Plenty of trouble."

It seems that at that institution one freshman class contains John James of Buffalo, N. Y., and James John, son of John John, West Chester, Pa. To make the matter still worse, the boys sit near each other. Jacob Jacobs and Roger Rogers, in the same class, sit just across the aisle from the first pair.

But that wasn't so bad. The limit was reached when three Bernard Cohens signed up for the same course. The professors at Alabama, being endowed with that professorial wisdom, solved the problem by assigning the three men to different classes.

A WAY FROM Grind

Social activities of Technology were relatively quiet over the weekend. Only one initiation dance and two formal dances were held.

Theta Delta Chi

Don McClellan's orchestra furnished the music at the first formal dance given by Theta Delta Chi on Friday evening from 9 until 2 o'clock. A number of guests were present from the chapters at Dartmouth and Stanford. Mr. and Mrs. A. S. Houghton were chaperones. Punch and cookies were served to the sixty couples present.

Sigma Chi

About 125 couples attended the open formal dance at the Sigma Chi house Wednesday evening. Mr. and Mrs. William Hall served as chaperones. Roy Lamson and his Harvardians played for dancing from 9 till 2 o'clock.

Phi Beta Delta

Phi Beta Delta held its initiation dance and formal initiation of new members during the Thanksgiving holiday. Wednesday evening at the Coconut Grove, fifty couples enjoyed the annual initiation dance, at which Mr. and Mrs. Reuben served as chaperones. The following evening the formal initiation of candidates took place at the chapter house, and was followed by a formal dinner at which Mr. Samuel Rittenberg and Mr. Harry Kalker spoke.

Dr. Tryon Keeps Out Of Hot Water During Last Montana Visit

Montana Club Secretary Tells
Of Adventures of Dr. Tryon
On Recent Visit

Carl J. Trauerman '07, an officer of the Montana Technology Club located at 25 East Broadway, Butte, sends us the following letter describing an incident of the recent visit of Professor James L. Tryon to that State.

"Altho Montana is the third largest State in the Union, filled with natural resources and scenic beauties (both animate and inanimate), from a recent happening it might just as well be a Rhode Island.

"Professor James L. Tryon, director of admissions, recently visited the Alumni of this State and in the western end saw about everything that was to be seen, including Yellowstone National Park, where a person has an awful time keeping out of hot water, and Virginia City, where in the early days dollars grew from the ground and men hung on trees.

"Anyhow coming from Bozeman to Butte with Professor Thaler, M.I.T. 1922, of Montana State College, the axle of the car in which they were riding suddenly snapped. (Editorial Note by the writer — It is 'unusual' for axles to break in Montana.)

"They were picked up by a Good Samaritan, who introduced herself as Mrs. James G. Graham, of Butte, and none other than the mother of Thomas G. Graham, now a freshman at M.I.T."

As We See the MOVIES

R.K.O.-Keith's

Without the excellent characterization of the man-made monster by Boris Karloff, "Frankenstein," the current attraction at the R.K.O.-Keith Theater, would be just another movie thriller. With the former portrayal of Dracula (in the stage play) in the cast, however, the film becomes something unusual, something different, and certainly not devoid of thrills, even for the most unimaginative. "Frankenstein" is the story of a tremendous experiment, nothing less than the creation of a man from various fragments stolen from graves and whatnot and endowed with life by some new and powerful electric ray. The only slip that mars the result of the work is the fact that the monster is given the brain of a criminal instead of a normal being. Quiet and docile at first, the beast causes little trouble, but later aroused by tormenting he breaks loose and then — well, see it for yourself.

Supporting Mr. Karloff is an excellent cast consisting of Colin Clive, of "Jou-

(Continued on page four)

NEW T. C. A. MEMBERS TO MEET TOMORROW

Freshmen who indicated an interest in the work of the Technology Christian Association on the information cards which were sent out with the registration material last summer will meet for the first time tomorrow in the T.C.A. office at 5 o'clock.

The purpose of the meeting is to acquaint the new men with the work of the T.C.A., and to organize a freshman cabinet. The cabinet will devote itself to activities which will be of service to the freshmen at Technology. Regular meetings will be held every second week to discuss the work being done.

Any member of the freshman class who is interested in the activities of the T.C.A. is invited to attend tomorrow's meeting. Charles E. Quick '33, chairman of the freshman cabinet, will supervise the work of the new men.

The American • • College Editor

The Education of an Engineer — Who Should Pay for It?

To decide who should pay for the education of an engineer, and how much they should pay, we should first decide who gets the benefits from the engineer's training. Knowing how these benefits are divided we can then apportion the costs.

The engineer himself is benefited, first and most directly. From his training he gains increased earning power, a broader view of his world, increased appreciation of his environment, and thus the ability to live profitably and enjoyably. The advantages are broad, hard to express, and very often intangible.

The industries gain — the engineer is a major factor in production processes, and his training makes for efficient management. He is secured cheaply and pays for his compensation many times over.

Society gains — by securing a man broadly trained, a man who exerts the influence of the college man throughout all social and economic structures — and by those advancements that the technically-trained render civilization.

These three — the engineer, industry, and society, are the beneficiaries of the engineer's education. Each should pay, and the amounts should depend upon the respective gains. It is difficult to determine in what proportion each benefits, but it is probably in the order named.

Who pays now? The student or his family pays in part only. It costs between \$500 and \$600 a year to educate an engineering student, and about \$3,000 to \$4,000 to graduate an engineer, if we consider direct costs only, omitting interest on collegiate investment and depreciation and

MUSICAL CLUBS GIVE COMPETITION PRIZES

First Prize Goes to W. Brown, Second to McConnell

First and second prizes have been awarded to William H. Brown '33 and Miller E. McConnell '33 respectively, both of whom are members of Course IV, for their entries in the Poster Contest conducted by the Combined Musical Clubs for their Christmas Concert. Brown will be presented with a cash prize of five dollars during the concert. McConnell will receive as a reward one ticket to the concert and dance.

Very cleverly combining the conventional musical clef with the figures of a dancing couple against a background of miniature Christmas trees, the winning poster was by far the best entered in the contest and was chosen at once by the judging committee, composed of Omar Somers '33, Vincent Frisby '33, and Isidor H. Summer '33.

Second choice was a much closer affair, going finally to McConnell for his presentation, a roly-poly Santa Claus, conveying the Christmas spirit. The two posters will be on exhibition in the lobby of Walker Memorial on the evening of the concert and, meanwhile, are being preserved against the souvenir hunters.

loss of earnings while in college. If we include all costs, direct and indirect, the total cost has been estimated by analysts of the situation to be between \$8,000 and \$10,000 per graduate — a very large sum.

The cost of tuition to a student ranges from \$50 or so a year in publicly-supported institutions to around \$400 in privately-endowed colleges and universities. To this is added supplemental expenses, such as books.

The part that industry pays is a growing one. The industries have begun to realize that they pay a comparatively small part for the great benefits they receive. By State laws some industries cannot give donations of money. Of late they have begun to contribute to schools and colleges gifts of apparatus and equipment. Indirectly they contribute through taxes.

Society, at large, directly or indirectly, through benefactions and through taxes, pays the rest. Educational institutions are exempt from taxation.

Who should pay? Undoubtedly the three factors mentioned. The parts that the student and society should pay are debatable. Industry contributes very little. And that is about the only thing that is decided — industry at the present time is not contributing its just share of the expenses incurred in the education of the engineer.

— The Polytechnic Reporter.

Leisure?

Once more the value of a college education is emphasized in its relation to the proper use of leisure time. Rev. Dr. Ralph W. Sockman recently declared that there has been a fall in the morals of man through the physical comforts which are today made possible by the increased mechanism of our daily life.

Leisure hours are created where before men had to labor. Mechanical genius has made its contribution to man in labor-saving devices and luxurious comforts and by doing so has placed him in easier circumstances with more hours of rest. There is a paradox in this seeming progress for men today, loaded with leisure time and not knowing proper channels in which to spend these hours, give way to immoral and less cultural efforts than society demands. So with years spent in the creation to save time, do men waste it when their leisure is created.

But proper schooling and appreciation of the culture of the past coupled with an intelligent curiosity greatly aid in the good usage of leisure. The college education is the greatest means by which to bring to the minds of men the value of properly spent and creative hours which are not demanded by business or professional activities. Immoral and unseemly ways of utilizing spare time is the one danger to the man in college. If he surmounts this obstacle his mind is trained in cultural pursuits when other necessary activity does not demand his attention.

Thus the value of the college man to his community and society as a whole, can be estimated as being great. Culture and more idealistic tastes are created in a man during his four years of education at any university that serve to guide him in the productive use of his spare time.

— The Pennsylvanian.

THE LOUNGER

(Continued from page one)

says Young Innocence), hence the electorate could remain in bed election morning — and a Crusader no doubt could interpret the propaganda and inform us of the winner.

It's a Crooked Game

It's a crooked game anyway, as is shown by the following presentation of a few facts which were dug up by one of the Lounger's more capable henchmen who attended the organization meeting. Item One: Some of the cash collected will go into a slush fund to "induce" Congressmen to vote Wet. Now slush funds are not subject to an accountant's searching eye because entries such as: "To Congressman O. Zilch, \$997.53," are too revealing. Well, right away it is evident that a fund which is not audited is a sweet source of gravy to the insiders. Don't overlook that "induce Congressmen" ... just a crowd of purists trying to clean up the nation's moral life!

It seems that donations are limited to \$1.00 a man. Does that mean a larger donation would be refused? Are you, gentle reader (who is of course neither gentle nor particularly well read) as innocent as all that? Not at all! Here the idea is to take the extra cash and then write down a pile of names of others to take up the extra amount of the donation. Padded membership lists, you see.

Ring in the Suckers

This same "E. H." who wrote his letter with his head checked in the cloak room objected because the Lounger stated that the Booze-Aiders are being "sucked in by a gang of wild-eyed reformers." However, at the organization meeting it was suggested that the membership drive be concentrated on the freshmen because an upperclassman can bluff them into the game more easily than a comparatively more sophisticated upperclassman can be bluffed. Amend the above to read, "Sucked in by a gang of cool and calculating grafters."

The Lounger is no reformer. Whether the Crusaders live or die is a matter of indifference to him. His function is one of criticism and analysis. This movement is so puerile it is certain to be futile and all the excitement is evidenced by squeaking frosh. This is indicative of two things, that the movement is one of immature minds and the organizer was right, "suck in the frosh."

The Lounger has issued his warning and as far as he is concerned that ends the matter, but with one more gripe to be released. Why these Wets do not confess themselves as such seems the height of hypocrisy. They show their colossal nerve in naming a self-righteous, self-seeking crew after the bands of grim-jawed, steel-armored men whose white flame of sacrifice for a great religious ideal set half the world on fire in the days of remote history.

Crusaders Extend Campaign One Week Concentrated Drive Will Begin Today in Final Effort

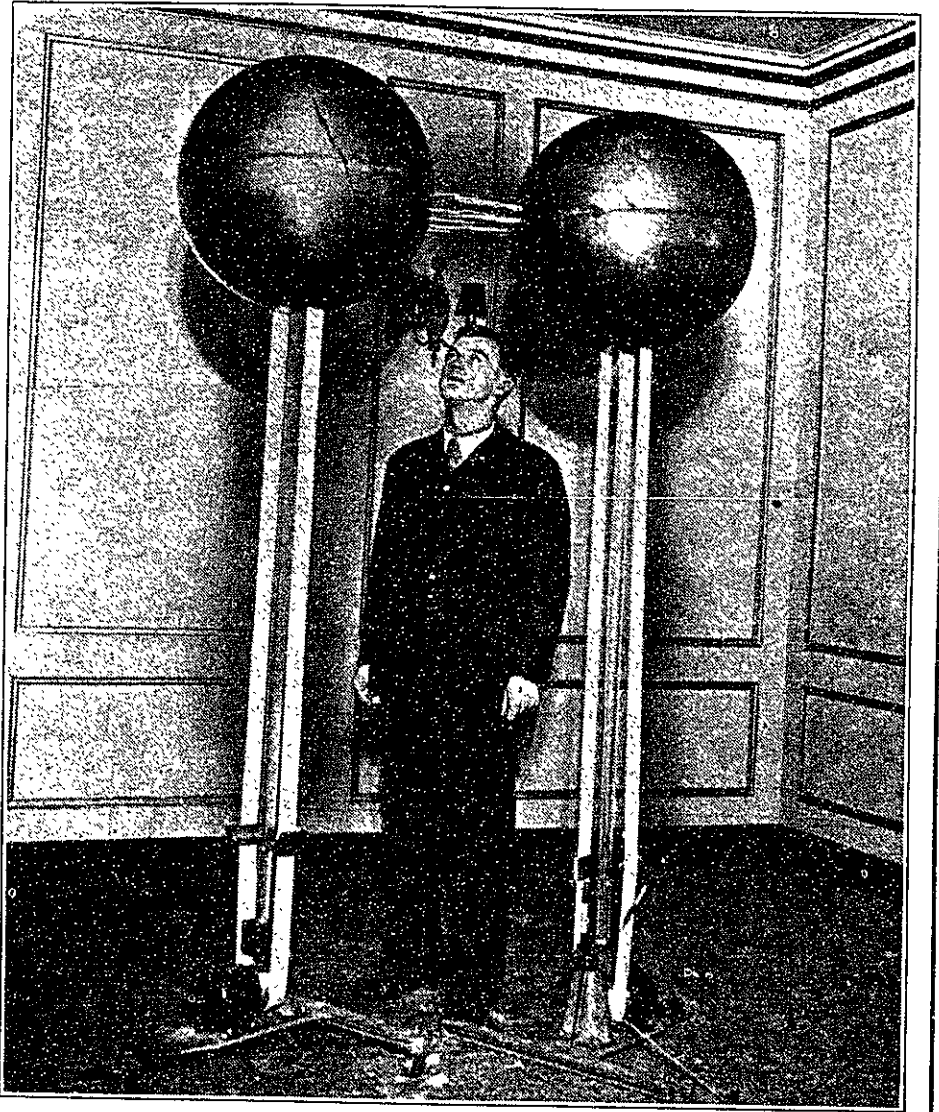
Although the campaign was scheduled to close last week, the drive for new members to the Crusaders, national anti-Prohibition college organization, will be continued during this week in one last concentrated effort to swell the Technology ranks which have thus far been lagging in comparison to the membership of other colleges.

Practically all fraternities now have a house representative to aid in the drive, and a number of dormitory men have already expressed their willingness to push the campaigns in the dormitories. As far as it was possible to learn, there will be no concentrated campaign on the commuters, and they will probably be canvassed by free-lancers on the campus.

Harvard is said to have 1200 members enrolled, and officials of the organization have expressed their hopes that about five hundred members from Technology would be signed.

fine arts STATE THEATRE BUILDING Begins **The Mystery Of Life** AS VIVIDLY INTERPRETED BY **CLARENCE DARROW** A UNIVERSAL PICTURE

Dr. Robert J. Van De Graaff, Research Associate and his Apparatus for Developing High Voltages



An electrical potential exceeding 1,500,000 volts has been obtained by Dr. Van de Graaff with the generator shown above and much higher voltages are expected from a larger model which will be built at Round Hill, on the same principles.

New Spectroscopic Laboratory Is Filled With Fine Apparatus

Building Is Built On Separate Foundation To Eliminate Vibration

(Continued from page one)

On entering the building one stands in a large corridor which runs the width of the building. On the second floor, directly above, is another corridor which has a large opening in the center so that large instruments may be hoisted up.

Most prominent among the instruments on the second floor is the thirty-foot vacuum spectrograph. This instrument was moved from its former place in the basement of Building 2. In moving this vacuum spectrograph it was necessary to insulate it thermally to protect its vacuum sensitivity. A large mercury vapor vacuum pump, the largest in the world, will

be installed to evacuate the tube of this spectrograph. This instrument requires for operation special photographic plates and a dispersion grating which has ten thousand lines per inch.

Now Offer Complete Facilities

Other instruments on the second floor include two large spectroscopes which use high-dispersion, silvered 30-degree prisms. In addition, there are two spectrophotometry laboratories in which intensities of lines in a spectrum are measured and a standard spectrographic laboratory for measurements made under ordinary conditions.

LYDIA DINNER
LEE 45c up
BREAKFAST — DINNER
Opposite Aeronautical Laboratory

COLD WEATHER HAS ARRIVED PARK YOUR CAR WITH US

Your Garage

AT Your Front Door

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The only Garage in Cambridge with a ONE stop master Service Station. Any service you may desire.

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Stock Contest Begun By Corporation XV

Members of the Organization Are Only Ones Eligible To Compete

Corporation XV will start its annual stock contest next Wednesday, December 2. This year the winner of the competition, which is to run until some time in April of next term, will be awarded a cash prize. The amount has not, as yet, been announced.

There is but one requirement for eligibility. All men in the contest must be members of the Society. The list of those who may enter will be made up from the enrollment as of Wednesday morning. This allows time for those who may still wish to join in time for the contest.

\$10,000 for Each Man

Each entrant will be given a hypothetical sum of \$10,000 to be invested as he sees fit. Only stocks which are listed on the New York Stock Exchange may be dealt in, however, and no more than five different types of securities may be held at one time.

Throughout the duration of the contest, there will be a limit of thirty transactions. Each transaction will consist of the purchase and sale of a block of one kind of stock. Closing prices of the New York market will be used in all instances in calculating the gains or losses. Further information on the subject may be obtained from the officers of the organization.

OFFICIAL BULLETINS OF GENERAL INTEREST

Physics and Physical Chemistry

Massachusetts Institute of Technology
and Harvard University
Cruft Lecture Room, Harvard University

Monday, November 30, 4.45 p.m., Cruft Lecture Room, Harvard University
Physical Colloquium:
1. "Recent Progress in the Study of Cosmic Rays." Dr. Ralph Bennett (M.I.T.)
2. "Rectifying Action of Cuprous Oxide in Contact with Other Metals." Dr. J. M. Ide.
Tea served at 4.15 o'clock in Library of New Physics Building.

Differential Geometry

Dr. D. J. Struik

Tuesday, December 1, 3.00 p.m., Room 2-235

Dr. Struik will deliver another lecture in his series on the History of Differential Geometry.

Physics and Physical Chemistry

Massachusetts Institute of Technology
Wednesday, December 2, 4.00 p.m., Room 4-402

Theoretical Seminar for Graduate Students:
Mr. Rosen will talk on the Hydrogen Molecule problem.

Aldred Lecture

Dr. C. E. K. Mees

Friday, December 4, 3.00 p.m., Room 10-250

Dr. C. E. K. Mees, Director of Research at the Eastman Kodak Company, will speak, under the title "Reminiscences," of his applications of research to the photographic industry first in England and later in the United States.
Open to Seniors, graduate students, and members of the instructing staff.

As We See The Movies

(Continued from page two)

ney's End" fame, Mae Clarke, John Boles, and Frederic Kerr. The only criticism that might be offered in regard to the cast is that all the players are very much too English to be even passably German, in agreement with the setting of the story.
S. R. F.

Loew's State

Occupying the center of the screen at almost every instant, either separately or together, Wallace Beery and Jackie Cooper, playing the parts of a broken-down prizefighter and his ever-admiring son in "The Champ," give a most lifelike presentation of the pair and enact scenes that actually tug at the heart-strings of even the most hardened of movie-goers.

Jackie Cooper, as Dink, the small son who is devoted to his father despite the fact that he has fallen from a world's champion to a loafer, gives an interpretation that is far above that of the usual child actor. His utter lack of restraint, of assumed childishness, makes the play-

ing all the more enjoyable. As the fallen Champ, a cheerful, gambling drunkard, Wallace Beery does some of his best acting. The part is realistically played, and as a team Jackie and Beery put over an excellent performance.

If one wishes to see the best of this type of picture he should by all means witness the showing of "The Champ" at the State.

The feature is supplemented by a comedy with Zasu Pitts, and the usual news reel and Mickey Mouse cartoon film.

B. H. W.

A piece of practical work was done by the class in political science at the University of Wichita last summer when they took over for a day the public administrative offices of the city of Wichita.

Be Popular.
Learn All The Latest
Ballroom Dances
Private lessons at any time
Class every Tuesday
evening at 8.30
Special rates to students
Young Lady Teachers
The Paparone Studios
1108 Boylston Street, Boston
Near Massachusetts Ave. Telephone, Commonwealth 8071

An Open Forum letter in the North Carolina Daily Tar Heel says that the building department of the University has been busy for a few whole days making paddles which will later be bought by fraternity freshmen when rushing season is over.

Walton Lunch Co.

420 Tremont Street
629 Washington Street
30 Haymarket Square
6 Pearl Street
242 Tremont Street
1083 Washington Street
44 Scollay Square
392 Massachusetts Avenue
19 School Street
437 Boylston Street
1080 Boylston Street
34 Bromfield Street
540 Commonwealth Avenue
204 Dartmouth Street
105 Causeway Street

ALLSTON
1215 Commonwealth Avenue
CAMBRIDGE
78 Massachusetts Avenue

CALENDAR

Monday, November 30

4.00 p.m. — Lecture on "Earthquake Research in Japan," by Professor Kyogi Suyehiro in Room 10-250.
5.00 p.m. — Banjo Club rehearsal in East Lounge of Walker Memorial.
6.00 p.m. — Alumni Council dinner in North Hall of Walker Memorial.

Tuesday, December 1

4.30 p.m. — Lecture on "The Philosophy of Hygiene," by Dr. Henry E. Sigerist in Room 10-250.
6.00 p.m. — Instrumental Club rehearsal in East Lounge of Walker Memorial.
7.00 p.m. — Alpha Phi Delta business meeting in Grill Room of Walker Memorial.

Wednesday, December 2

4.00 p.m. — Lecture on "Vibration of Buildings Caused by Earthquakes," by Professor Kyogi Suyehiro in Room 10-250.
6.00 p.m. — Technology Catholic Club supper meeting in North Hall of Walker Memorial.
6.00 p.m. — Course 15 Graduates' dinner meeting in Grill Room of Walker Memorial.

Undergraduate Notices

MUSICAL CLUBS

There will be a meeting of all members, including freshmen and Sophomores, of the management of the Musical Clubs, in the Musical Clubs office this afternoon at 5 o'clock. Everybody be sure to be present.

Infirmary List

Malloy, Mrs. (employee)
Thumm, Charles '33
Wuestefeld, George '34.
Senior Dance

FINAL DATE SET FOR ANNUAL SENIOR DANCE

Seniors will be interested to know that a date has been set for their annual dance. It will be held in the Main Hall of Walker Memorial on January 15, and music will be furnished by the Techtonians. The affair will be for Seniors exclusively, and tickets for this very promising date may be obtained free of charge.

The committee in charge consists of John Lawrence '32, chairman; William A. Kirkpatrick '32 and Bustace B. Corson '32.

Freshmen customs and freshmen-Sophomore rivalry have been discarded at Ohio University in accordance with laws recently passed by the Junior-Senior Governing Board.

At Millsaps College in Mississippi tuition fees are paid according to the scholastic standing of the individual. "A" students pay least and "flunkers" pay most.

Salem College is the only women's college in North Carolina which permits students to smoke publicly.



Where Turkish tobacco grows

land where the tobacco* grows in small leaves on slender stalks—to be tenderly picked, leaf by leaf, hung in long fragrant strings, shelter-dried and blanket-cured. Precious stuff!

Let's taste that delicate aromatic flavor—that subtle difference that makes a cigarette!

XANTHI .. CAVALLA .. SMYRNA

.. SAMSOUN .. famous tobaccos!

*Turkish tobacco is to cigarettes what seasoning is to food—the "spice," the "sauce"—or what rich, sweet cream is to coffee!

You can taste the Turkish in Chesterfield—there's enough of it, that's why. Chesterfield has not been stingy with this important addition to good taste and aroma; four famous kinds of Turkish leaf—Xanthi, Cavalla, Samsoun and Smyrna—go into

the smooth, "spicy" Chesterfield blend.

This is just one more reason for Chesterfield's better taste. Tobaccos from far and near, the best of their several kinds—and the right kinds. And pure, tasteless cigarette paper, the purest made. The many requisites of a milder, better smoke, complete!

That's why they're GOOD—they've got to be and they are.



In every important tobacco-growing center Chesterfield has its own tobacco buyers

